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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,640

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Jiri Babej

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EXAMINER

JENNINGS, STEPHANIE M

ART UNIT

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3725

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,640	Applicant(s) BABEJ ET AL.	
	Examiner Stephanie Jennings	Art Unit 3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44-86 is/are pending in the application.
- 4a) Of the above claim(s) 69-81 and 83-85 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 44-68 and 86 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20080314, 20070110</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Regarding claim 44, the phrases "optionally" and "normally" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

4. Regarding claim 44, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

5. The term "at least" in claim 45 is a relative term which renders the claim indefinite. The term "at least" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear from the claim language and the specification what is meant by "at least substantially the same."

6. The term "at least substantially" in claims 50 and 55 is a relative term which renders the claim indefinite. The term "at least substantially" is not defined by the claim, the specification

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does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear from the claim language and the specification what is meant by "at least substantially."

7. Regarding claim 58, the phrase "preferably" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

8. Regarding claim 68, the phrases "optionally" and "preferably" render the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 44-50, 54-55, 57, 59-62, 64-68 are rejected under 35 U.S.C. 102(b) as being anticipated by Babej et al. US Patent Application Publication No. 2003/0190214 A1.

11. Babej anticipates:

12. Limitations from claim 44, method for the manufacture of hollow body elements such as nut elements for attachment to components normally consisting of sheet metal, in particular for the manufacture of hollow body elements (11), having an at least substantially square or rectangular outline by cutting individual elements to length from a section present in form of one

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of a profile bar (14, 16) and a coil (figure 1 and paragraphs 7 and 31) after prior piercing of apertures into the section (paragraph 9), optionally with subsequent formation of a thread cylinder (paragraph 9) using a progressive tool having a plurality of working stations in each of which respective operations are carried out, the method comprising: a) in a first step, starting from a section rectangular in cross-section (paragraph 9), an upsetting process is carried out which leads to a cylindrical recess at a first broad side of the section and to a hollow cylindrical projection at a second broad side of the section opposite to the first broad side, the projection being surrounded by a ring-shape recess, b) in a second step, a web remaining between the base of the cylindrical recess and the base of the hollow cylindrical projection is pierced or punched out to form a through-going aperture (paragraphs 9 and 10), c) in a third step, which is combinable with the second step b), the hollow cylindrical projection is flattened or crushed at its free end for the formation of a piercing section and undercut at the outer side, whereafter the hollow body element is separated from the section and optionally provided with thread (paragraphs 9 and 10).

13. Limitations from claim 45, method in accordance with claim 44, wherein during the upsetting operation of step a), the diameter of the cylindrical recess and the inner diameter of the hollow cylindrical projection are made at least substantially the same (figures 2A and 2B).

14. Limitations from claim 46, method in accordance with claim 44, wherein during one of the upsetting process of step a), the piercing process of step b) and the flattening process of step c), the opening of the cylindrical recess is executed at the first broad side of the section with a rounded or chamfered run-in edge (paragraph 34).

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15. Limitations from claim 47, method in accordance with claim 44, wherein during one of the upsetting process of step a), the piercing process of step b) and the flattening process of step c), the opening of the hollow cylindrical projection is provided at its free end with a rounded or chamfered run-out edge (23) (paragraph 32).

16. Limitations from claim 48, method in accordance with claim 44, wherein during the piercing of the web in accordance with step b), an aperture (22) is produced with a diameter which at least substantially corresponds to a diameter of the cylindrical recess and to an inner diameter of the hollow cylindrical projection (paragraph 32).

17. Limitations from claim 49, method in accordance with claim 44, wherein during the upsetting process of the first step a), the free end of the hollow cylindrical projection is provided at an outside with a chamfer (23) (paragraph 32).

18. Limitations from claim 50, method in accordance with claim 44, wherein during the upsetting process of the first step a), the recess is provided with a ring-like base region (36 or 216), which stands at least approximately in a plane parallel to the first and second broad sides (12 or 212), is provided at a radially inner side with an at least substantially rounded transition into an outer side of the hollow cylindrical projection and merges at the radially outer side into a conical surface (figures 2A-2F, figure 17A).

19. Limitations from claim 52, method in accordance with claim 50, wherein the transition from the ring-shaped region of the ring recess into the conical surface is rounded (Figure 4E).

20. Limitations from claim 53, Method in accordance with claim 50, wherein a run-out of the conical surface of the ring recess into the second broad side of the section is rounded (Figure 4E).

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21. Limitations from claim 54, method in accordance with claim 44, wherein during the manufacture of the undercut, this is formed by a cylindrical part of the hollow cylindrical projection, which merges approximately level to the second broad side of the section into a region of the hollow cylindrical projection, which is thickened upon carrying out the step c), and which at least substantially projects beyond the second broad side of the section (paragraphs 9-10).
22. Limitations from claim 55, method in accordance with claim 54, wherein the thickened region of the hollow cylindrical projection is made at least substantially conical and diverges away from the first and second broad side (Figure 4E).
23. Limitations from claim 59, method in accordance with claim 44, wherein during the upsetting process in accordance with step a) a ring-like raised feature (102) is provided at the first broad side of the section around the cylindrical recess (figure 4E).
24. Limitations from claim 60, method in accordance with claim 44, wherein during the upsetting process in accordance with step a) features providing security against rotation are formed one of outwardly at the hollow cylindrical projection and inwardly in a region of the ring recess around the hollow cylindrical projection (paragraph 40).
25. Limitations from claim 61, method in accordance with claim 60, wherein features (46) providing security against rotation are formed by one of ribs and grooves at a radially outer side of the hollow cylindrical projection (paragraph 40).
26. Limitations from claim 62, method in accordance with claim 60, wherein features providing security against rotation are formed by ribs, which extend in an axial direction and bridge the undercut of the hollow cylindrical projection (paragraphs 40 and 41).

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27. Limitations from claim 64, method in accordance with claim 60, wherein features providing security against rotation are formed in the step a) by radially extending ribs, which bridge the ring recess (paragraph 40).

28. Limitations from claim 65, method in accordance with claim 60, wherein features providing security against rotation are made in the form of obliquely positioned ribs, which extend in a radial direction over the ring recess and in an axial direction along the hollow cylindrical projection (paragraphs 41 and 42).

29. Limitations from claim 66, method in accordance with claim 60, wherein features providing security against rotation are made in the form of ribs, which extend in a radial direction across the ring recess and in an axial direction along the hollow cylindrical projection (76) (paragraph 42).

30. Limitations from claim 67, method in accordance with claim 60, wherein features providing security against rotation are made in the form of recesses, and indeed in step a), step b) or step c), wherein the recesses are arranged in the inclined surface (55, 57) of the ring recess (34) (paragraph 44).

31. Limitations from claim 68, method in accordance with claim 44, wherein in step a), likewise starting from the section rectangular in cross-section, a forming process is carried out in which optionally no cylindrical recess is provided at the first broad side of the section, but which leads at the second broad side of the section to a recess at the second broad side of the section, which is preferably polygonal in plan view, in particular square, which surrounds the hollow cylindrical projection that is formed partly from the material displaced during the formation of the recess and partly from the material displaced during the formation of the hollow space of the

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hollow cylindrical projection, with the recess being provided with one of a ring surface and surfaces set obliquely to a central longitudinal axis of the hollow body element and in the second step b), the material between the first broad side of the section and the base of the hollow cylindrical projection is one of pierced and punched out for the formation of a through-going aperture (paragraphs 9 and 10).

Claim Rejections - 35 USC § 103

32. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

33. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

34. Claims 51, 56-58, and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Babej et al. US Patent Application Publication No. 2003/0190214 A1.

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35. Limitations from claim 51, method in accordance with claim 50, wherein the conical surface of the ring recess has an included cone angle in a range between 60° and 120°, preferably of approximately 90° (figure 13).

36. Limitations from claim 56, method in accordance with claim 55, wherein the cone angle of the thickened region of the hollow cylindrical projection lies in a range from 30° and 70°, preferably at approximately 50° (paragraph 34).

37. Babej does not explicitly disclose an included cone angle between 60° and 120° or 30° to 70°; however it is apparent from Figure 13 that the angle α covers a range of 60° to 120° and the invention would be capable of functioning with such a cone angle range.

38. Limitations from claim 57, method in accordance with claim 44, wherein after the flattening process, the hollow cylindrical projection ends at its free end outwardly in a piercing edge, which is provided as a sharp edge (paragraph 10).

39. Limitations from claim 58, method in accordance with claim 44, wherein the ring recess is executed with an outer diameter, which is only made somewhat smaller than a smallest transverse dimension of the hollow body element, which is rectangular in plan view, whereby the ring recess with the second broad side of the section forms webs that remain at narrowest points in a plane of the second broad side with a width in a range from 0.25 to 1 mm, preferably at approximately 0.5 mm (paragraphs 39 and 40).

40. Babej discloses the claimed invention except for the recess width ranges. It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a width in a range between 0.25 to 1 mm, since it has been held that where the general conditions

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of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

41. Limitations from claim 63, method in accordance with claim 62, wherein the ribs providing security against rotation have a radial width, which corresponds at least substantially to between 40% and 90% of a maximum radial depth of the undercut (paragraph 40-42).

42. Babej discloses the claimed invention except for the fractional radial depth of the undercut. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the ribs correspond to a specific radial depth, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephanie Jennings whose telephone number is (571) 270-7392. The examiner can normally be reached on Monday-Thursday, 7 am - 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dana Ross can be reached on (571) 272-4480. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. J./
Examiner, Art Unit 3725
May 1, 2009

/Dana Ross/
Supervisory Patent Examiner, Art Unit
3725